RADCHENKO, V.P.

Measuring the deflection of wells by the "Mir" apparatus.
Razved.i okhr.nedr 22 no.5:23-28 My '56. (MLRA 9:9)

1. Ukrainskiy geologo-razvedochnyy trest.
(Oil well drilling) (Boring--Measurement)

AUTHOR: Stolyarov, A.G. SOV/142-58-4-29/30

TITLE: All-Union Session Marking "Radio Day" (Vsesoyuznaya nauchnaya sessiya, posvyashchennaya "Dnyu Radio")

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy - Radiotekhnika, 1958, Nr 4, pp 517-521 (USSR)

ABSTRACT: During the period May 12-17, 1958, an All-Union Scientific Session was held in Moscow, devoted to "Radio Day". It was organized by the Scientific Technical A.S.Popov Association for Radio-Engineering and Electro-Communications. 280 papers were read at the session, 25 in the field of information theory and more than 20 in the field of electronics, dealing with theoretical/experimental research on electronic equipment. V.I.Siforov spoke on "The Transmission Capacity of Single-Ray and Multi-Ray Communication Canals". L.I.Filippov looked at the potential interference resistance of an ideal radio receiver. D.A.Novik

Card 1/7

spoke on "The Transmission System of Electric Signals by the Optimal Code of Shannon-Fano." A. Ye. Basharinov and B.S.Pleyshman discussed "The Use of the Successive Analysis Method in Equipment for Determining Weak Signals in Noise", and L.M.Fink examined "The Potential Interference Resistance in a Non-Definite Signal Phase". V.A.Kashirin and G.A.Shustova discussed "The Optimal Parameters of the Tele-measuring System with regard to Interference Resistance". B.S.Pleyshman spoke on the question of creating an optimal code - in the Shannon conception - in the case of a binary symmetrical canal. L.P.Borodin discussed "The Method of Creating Several Codes with a Simple Base". In the field of electronics, P.A.Tarasov spoke on "Broad Band Electron Ray Tubes for Observation and Recording of Electric Impulses and Ultra-High Frequencies" and V.P.Radchenko examined the question of the practical utilization of tubes with a cathode net. G.P.Semenov, V.P.Sazonov, M.N.Shitneva and A.S.Bondarev examined: "Use of the Radiosonde with a High-Ohm Feed for Examining Electromagnetic fields in resonators and wave guides".

Card 2/7

and Yu. Katsman spoke on "The Selection of Oscillatory Energy of an Electronic Current, Modulated According to Density". M.B.Golant discussed a negative clystron with a wide range of electron adjustment. S.I.Bychkov explained the phenomenon of electron displacement and gave an approximate description of the frequency characteristics of the magnetron under conditions of high amplitude oscillations. A.I.Tereshchenko spoke on "The Influence of Various Factors on a Critical Magnetic Magnetron Field with a Grid". [illegible] A.I.Lebedev-Karmanov spoke on "Modern Television Stations" and V.M.Katushkina and Z.I.Model' discussed "Bridge Methods of Combining the Outputs of Several Generators". [illegible] G.Sh.Kevanishvili spoke on "The Theory of Non-Linear Oscillations in Radio Engineering". [illegible] V.A.Khromov and G.L.Suchkin spoke on "The Electro-magnetic Radiation in Systems not Conditioned by the Theory of Reciprocity in the Ultra-High Frequency Range". [illegible]

S/123/61/000/009/006/027
A004/A104

1 1710

AUTHOR: Kalchenko, V.P.

TITLE: Selecting expedient heat treatment conditions

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 9, 1961, 77, abstract 9B552 ("Tr. Khim.-metallurg. in-ta. Sib. otd. AN SSSR", 1960, no. 14, 35 - 49)

TEXT: On the example of chrome-nickel-molybdenum steel (35XHM [35KhNM]) /B the author shows the possibility of establishing optimum heat treatment conditions for parts according to the thermal functional diagrams of austenite transformation, and also taking into account the properties of structural constituents and the part center cooling curve. In this connection it is not necessary to resort to the method used in practice to select the conditions with the aid of specimen tests treated in many ways. The knowleige of the thermal functional diagrams of austenite transformation of various steel grades and the cooling curve of various parts facilitates the work of metallographers to establish appropriate heat treatment conditions. There are 7 figures and 4 references.

N. Il'ina

[Abstracter's note: Complete translation]

Card 1/1

S/056/60/039/003/007/045
B004/B060

AUTHORS: Burmistrov, V. R., Radchenko, V. P.

17

TITLE: Two-cascade Gamma Transitions in the Nd^{114} Nucleus Accompanying the Capture of Thermal Neutrons

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 39, No. 3 (9), pp. 584-586

TEXT: The gamma radiation of natural neodymium isotope mixtures was studied by the method of addition with coincidence (Ref. 1), which accompanies the capture of thermal neutrons. The pulses of two NaI(Tl) scintillation counters were oriented in parallel to the coincidence circuit and the linear addition circuit. With coincidence of pulses, and when their sum corresponded to the energy of nuclear levels, the pulses of one counter were analyzed. Fig. 1 shows the gamma spectrum of neodymium. The following two-cascade transitions with a total energy of ~7.81 Mev were measured (values are in Mev): (7.42±0.07) - (0.48±0.02); (7.15±0.10) - (0.69±0.03); (6.80±0.10) - (1.22±0.03); (6.18±0.15)

Two-cascade Gamma Transitions in the Nd^{114} Nucleus Accompanying the Capture of Thermal Neutrons

S/056/60/039/003/007/045
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- (1.85 ± 0.12); (5.2 ± 0.15) - (2.56 ± 0.15). The peak of (7.57 ± 0.18) Mev corresponding to the measured peak of (0.34 ± 0.02) Mev could not be measured owing to the insufficient resolving power of the apparatus. The errors of measurement of the relative intensities were found to be 40%. The observed transition 7.42 - 0.48 Mev might be caused by Nd^{146}. The transition 7.54 - 0.34 Mev is probably caused by Sm^{150}. Fig. 2 shows a scheme of the gamma transitions of Nd^{144}. An appendix refers to a lecture delivered at the Second All-Union Conference on Nuclear Reactions (Moscow, 1960), and suggests that the 6.8 - 1.2 Mev transition might be caused by gadolinium. The authors mention a paper by Ye. I. Firsov and A. A. Bashilov. There are 2 figures and 7 references: 2 Soviet and 3 US.

SUBMITTED: April 26, 1960

Card 2/2

PETROV, K.A.; YEVDAKOV, V.P.; BILEVICH, K.A.; RADCHENKO, V.P.; NIFANT'YEV, E.Ye.

Properties of phosphorus acid amides. Part 1: Reactions of amidophosphites with phenols. Zhur.ob.khim. 32 no.3:920-923 Mr '62. (MIRA 15:3)

(Phosphoramidous acid) (Phenols)

ACCESSION NR: AP4009143 S/0190/64/006/001/0010/0012

AUTHORS: Petrov, K. A.; Yevdakov, V. P.; Bilevich, K. A.; Kosy*rev, Yu. S.; Radchenko, V. P.

TITLE: Properties of amides of phosphorus acids. 7. A new method for the synthesis of phosphorus-containing polyesters

SOURCE: Vy*sokomolekulyarny*ye soyedineniya, v. 6, no. 1, 1964, 10-12

TOPIC TAGS: phosphorus acid, phosphinous acid, amides, polyester, polycondensation, hydroquinone, sulfur, oxygen, tetraethyldiamide, hexaetheyltriamide

ABSTRACT: Polyesters of trivalent phosphorus acids were obtained by the reaction of tetraethyldiamides of phosphorous or phosphinous acids with hydroquinone in a 1:1 molar ratio. The ingredients are heated at 120C during the initial 1-2 hour period, then at 220C during the subsequent 3 hours, vacuum being applied to remove the evolving diethylamine. The resulting products are yellowish transparent substances, the polyphosphinites being solid and the polyphosphites of rubber-like consistency, the latter possessing good adhesion to glass. The reaction product of hexaethyltriamidophosphite with hydroquinone yields a brittle trimeric polyester. The

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ACCESSION NR: AP4009143

products obtained had a specific viscosity of 0.04-0.25 (in a 1.5% solution in dimethylformamide) and a decomposition range of 280-490C. Upon treatment with sulfur or oxygen, the trivalent phosphorus of the polyesters became converted to the pentavalent form. In conclusion, the authors call attention to the fact that while the polyesters obtained by their technique had softening points within the 130-150C range, the corresponding products obtained by the conventional method from phosphorus dihalides and diatomic phenols had softening points which were 70-80C lower. Orig. art. has: 3 formulas and 1 table.

ASSOCIATION: none

SUBMITTED: 16Apr62 DATE ACQ: 10Feb64 ENCL: 00

SUB CODE: CH NO REF SOV: 007 OTHER: 003

Card 2/2

L 3025-66 EWT(m)/EPF(c)/EWP(j)/T RM

ACCESSION NR: AP5022010 UR/0286/65/000/014/0078/0078

678.85

AUTHOR: Petrov, K. A.; Yevdakov, V. P.; Bilevich, K. A.; Radchenko, V. P.; Kosarev, Yu. S.

TITLE: A method for producing organic phosphorus polymers. Class 39, No. 172996

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 14, 1965, 78

TOPIC TAGS: organic phosphorus compound, polymer, phosphorous acid

ABSTRACT: This Author's Certificate introduces a method for producing organic phosphorus polymers based on amides of phosphorous and phosphonous acids. A wider selection of raw materials is provided by using dihydroxyl-containing aryls as the second component for polymerization.

ASSOCIATION: none

SUBMITTED: 31Oct61 ENCL: 00 SUB CODE: MT, GC

NO REF SOV: 000 OTHER: 000

Card 1/1

ACC NR: AT0033685 SOURCE CODE: UR/3231/66/000/001/0092/0106

AUTHOR: Pariyskiy, B. S.; Radchenko, V. P.

ORG: none

TITLE: Longitudinal waves accompanying a fracture

SOURCE: AN SSSR. Institut fiziki Zemli. Vychislitel'naya seysmologiya, no. 1, 1966. Analiz seysmicheskikh nablyudeniy naelektronnykh mashinakh (Use of electronic computers in the analysis of seismic observations), 92-106

TOPIC TAGS: high speed computer, earthquake, seismic modeling, seismic wave, wave mechanics / BESM-2 high-speed computer

ABSTRACT: The article chiefly examines the relation of the dominant wave period to the dimensions of the earthquake focus. This is of special interest in view of the attempts made to estimate the stressed state in the focus according to the relation of earthquake energy to earthquake period. The matter is considered from the standpoint of the plane problem of the excitation of waves due to a discontinuity occurring in a medium represented by a homogeneous ideally elastic space. It is assumed that homogeneous tangential stresses act until a certain

Card 1/2 UDC: 550.34-517:681.142.35

instant in this space. The model of the discontinuity is taken as an ellipse (in the limiting case, a plane slit) at which at the initial instant the tangential stresses begin to decrease to zero. This model corresponds to a strongly extended fracture; the ellipse simulates a zone of inelastic deformations along which displacements occur. The problem reduces to that of the effect of the stresses applied at the initial time instant to that ellipse and the solution is obtained in numerical form, with the polar coordinate being isolated by means of a Fourier transform and the remaining equation being numerically solved with respect to the radial coordinate by means of a BESM-2 high-speed computer. Only longitudinal waves are considered, since a large direct access memory is required to analyze transverse waves. Some findings on the direction in which oscillations are generated within the focus also are obtained but, owing to the idealized treatment of the problem (due to the limited memory capacity of the BESM-2), they cannot be considered absolutely reliable. "The authors are deeply indebted to M. G. Neugauz, A. A. Abramov and L. S. Klabukova for their valuable suggestions and unflagging assistance in this project. Orig. art. has: 17 formulas, 9 figures, 3 tables.

SUB CODE: 08, 09, 20/ SUBM DATE: none/ ORIG REF: 003/ OTH REF: 001

RADCHENKO, V.S., elektromekhanik

Discussion of the article "Pedal or track circuit"? Avtom., telem. i sviaz' 9 no.11:42 N '65.

(MIRA 18:12)

1. 11-ya distantsiya Pridneprovskoy dorogi.

RADCHENKO, V.S., POLETUYEV, A.I., YUDIN, A.M.

Grinding of zinc phosphide with additions of petroleum coke.
Khim. prom. no. 4:307 Ap '64. (MIRA 17:7)

ANTIPOV, V.M.; RADCHENKO, V.T.; SHUBA, P.F.

Adopting the KM-87 unit at the "Annenskaia" mine. Ugol' Ukr. 10 no. 1:37-38 Ja '66. (MIRA 18:12)

1. Nachal'nik uchastka shakhty "Annenskaya" (for Antipov). 2. Nachal'nik planovogo otdela shakhty "Annenskaya" (for Radchenko). 3. Zamestitel' glavnogo inzhenera tresta Kadiyevugol' (for Shuba).

RADCHENKO, Ye.

New unit for use in the production of bitumen. Neftianik 6 no.1: 22-23 Ja '61. (MIRA 14:4)
(Bitumen)

DRABKINA, I.Ye.; KARASEV, I.P.; ORECHKIN, D.B.; RADCHENKO, Ye.D.; SHESTOPALOVA, N.G.

Preliminary data on the composition of petroleums of the Markovo field. Geol. nefti i gaza 7 no.7:29-33 Jl '63. (MIRA 16:7)

1. Gosudarstvennyy trest po geologicheskim izyskaniyam na neft' v Vostochnoy Sibiri i Angarskiy kombinat.
(Irkutsk Province--Petroleum--Analysis)

RADCHENKO, E. D.

USSR.

Preparation of benzylamine from benzyl chloride and urea. A. E. Kretov and E. D. Radchenko. *J. Appl. Chem. U.S.S.R.* 26, 695-8(1953)(English translation).—See *C.A.* 48, 9944c.

H. L. H.

Ye. I.

(3) 6

Preparation of benzylamine from benzyl chloride and urea. A. P. Kirilov and E. H. Radchenko (Dneprope-trovsk. Chem.-Technol. Inst.). *Zhur. Prikład. Khim.* 26, 743–8 (1953).—In the reaction of $PhCH_2Cl$ with urea there are first formed mono- and dibenzylurea, which, heated with alkali yield $PhCH_2NH_2$. The best yield of benzyl- and dibenzylureas is 70% (based on RCl), obtained by refluxing 1 mole $PhCH_2Cl$ with 2 moles urea and 0.83 mole H_2O 5 hrs. Generally higher temps. and lesser concns. of H_2O result in a higher dibenzylurea content in the product. The alkylated urea fused with NaOH at 250–75° yields 94–5% techn. $PhCH_2NH_2$. Redistn. gives the pure amine, b. 183–5°, d_{25}^{25} 0.9802, n_D^{25} 1.5390. G. M. Kosolapoff

S/081/62/000/008/028/057
B160/B101

AUTHOR: Radchenko, Ye. D.

TITLE: Catalytic removal of carbon monoxide from hydrogen

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 8, 1962, 352, abstract 8K42 (Novosti neft. i gaz. tekhn. Neftepererabotka i neftekhimiya. no. 8, 1961, 28 - 31)

TEXT: Experiments in removing CO impurity from technical hydrogen (H_2 94.5-96%, CH_4 0.5-0.8%, N_2 3.5-5.0% and CO 0.1-1%) are described. Laboratory one- or two-stage continuous equipment was used with iron (GK-1-59 (GK-1-59) and АТУ-АУ-8055 (ATU-AU-8055)) and nickel-chromium catalysts (at a pressure of 300 atm and a temperature of 350°C for the iron and a pressure of 300 atm and a temperature of 250-300°C for the nickel-chromium catalysts). Purification proved to be twice as effective with the nickel-chromium catalyst as with the iron. Two-stage purification with a nickel-chromium catalyst made it possible to obtain hydrogen with a CO content down to 3 ml/m^3, the initial content being up to 1%; the volumetric rate

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S/081/62/000/008/028/057
B160/B101

Catalytic removal of carbon...

can reach 10,000 hrs^{-1} in this case. Industrial equipment using this method operates in a stable manner and produces hydrogen with a CO content of ~10 ml/m^3 after the second stage. [Abstracter's note: Complete translation.]

Card 2/2

TOVBIN, I.M., inzh.; PETROV, N.A., kand. tekhn. nauk; MAYOROV, D.M., kand. khim. nauk; STERLIN, B.Ya., kand. tekhn. nauk; NEVOLIN, F.V.; VARLAMOV, V.S., kand. tekhn. nauk; CHERKAYEV, V.G., kand. khim. nauk; BLIZNYAK, N.V., inzh.; ORECHKIN, D.B., kand. tekhn. nauk; RADCHENKO, Ye.D., inzh.; SHEPOT'KO, O.F., inzh.

Obtaining higher unsaturated alcohols by the method of selective hydrogenation of whale oil. Masl.-zhir. prom. 29 no.3:18-21 Mr '63. (MIRA 16:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut neftekhimicheskikh protsessov (for Mayorov). 2. Vsesoyuznyy nauchno-issledovatel'skiy institut zhirov (for Sterlin, Nevolin, Varlamov). 3. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskikh i natural'nykh dushistykh veshchestv (for Orechkin, Radchenko, Shepot'ko).
(Whale oil) (Alcohols)

RADCHENKO, YE. G.

USSR/Medicine - Dysentery Nov 53

"Therapy of Dysentery and Other Intestinal Diseases With Colibacterin," Ye. G. Radchenko, Chita Inst of Epidemiol and Microbiol

Zhur Mikro, Epid, i Immun, No 11, p 69

Colibacterin proved to be effective in alleviating acute dysentery, chronic dysentery, and enterites of unknown etiology. In view of the short period during which colibacterin preparations can be stored without loss of effectiveness, improvement in methods of prepn is desirable.

271T50

1. PAKHOMOV, S. P. ; RADCHENKO, Ye.P.

2. USSR (600)

4. Carp - Stalingrad Reservoir

7. Ways to create reserves of Volga carp in the Stalingrad Reservoir, S. P. Pakhomov, Ye. P. Radchenko, Ryb. khoz. 29 no. 3 '53.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953, Uncl.

[redacted], Yu. S. Cand. Tech. Sci.

Dissertation: "Analysis of the Movement of Products in Manufacturing Process."
Moscow Technological Inst of the Light Industry imeni I. M. Kaganovich, 23 Jan 47.

SO: Vecherniaya Moskva, Jan., 1947 (Project #17836)

RADCHENKO, Yu., assistent; PIL'TENKO, V., agronom; CHENKIN, A.

Cabbage moth Barathra brassicae as a dangerous pest. Zashch.rast. ot vred.i bol. 10 no.4:25-27 '65. (MIRA 18:6)

1. Kafedra zoologii i entomologii Khar'kogskogo sel'skokhozyaystvennogo instituta (for Radchenko). 2. Zamestitel' nachal'nika Upravleniya zashchity rasteniy RSFSR (for Chenkin).

NAYDENOV, G., aspirant; SOLYANIK, S.; RADCHENKO, Yu., assistent; PAPOYAN, F., aspirant; GOKHELASHVILI, R., kand.biolog.nauk; LEVCHENKO, N., kand. sel'skokhoz.nauk; ARUTYUNYAN, Kh.; MOVSESYAN, R.; MILOV, M., aspirant

Brief news. Zashch.rast.ot vred.i bol. 10 no.4:50-52 '65.
(MIRA 18:6)

1. Ukrainskiy institut oroshayemogo zemledeliya, Kherson (for Naydenov). 2. Predsedatel' kolkhoza imeni Zhdanova, Chuguyevskogo rayona, Khar'kovskoy oblasti (for Solyanik). 3. Khar'kovskiy sel'skokhozyaystvennyy institut (for Radchenko). 4. Armyanskiy institut zashchity rasteniy (for Papoyan). 5. Skriyskaya opytnaya stantsiya plodovodstva (for Gokhelashvili). 6. Pedagogicheskiy institut, g. Birsk, Bashkirskaya ASSR (for Levchenko). 7. Leninakanskaya selektsionnaya stantsiya (for Arutyunyan, Movsesyan). 8. Vsesoyuznyy nauchno-issledovatel'skiy institut udobreniy i agropochvovedeniya, Moskva (for Milov).

RADCHENKO, Yu.A., master

System for signaling the approach of rolling stock. Energetik 10 no.4:31 Ap '62. (MIRA 15:4)
(Railroads—Signaling)

KARTAVOV, Sergey Alekseyevich, prof.; LEVCHENKO, Andrey Matveyevich, kand. tekhn. nauk; RUDNIK, Sergey Sergeyevich, doktor tekhn. nauk; BOVSUNOVSKIY, Yakov Ivanovich, kand. tekhn. nauk; BAZHENOV, Ivan Ivanovich, kand. tekhn. nauk; KOVALENKO, Vladimir Vladimirovich, kand. tekhn. nauk; LOMACHENKO, Zinaida Nikolayevna, kand. tekhn. nauk; MIL'SHTEYN, Mark Zel'manovich, kand. tekhn. nauk; RADCHENKO, Yuliya Gavrilovna, kand. tekhn. nauk; REZNICHENKO, Mikhail Petrovich, kand. tekhn. nauk; TRUBENOK, Aleksandr Davidovich, kand. tekhn. nauk; KHRISTICH, Zakhar Dem'yanovich, kand. tekhn. nauk; SHNAYDERMAN, Isay Yakovlevich, kand. tekhn. nauk; GOLUBOV, N.P., kand. tekhn. nauk, retsenzent; DUMANSKAYA, V.A., kand. tekhn. nauk, retsenzent; MAKSIMOV, G.D., kand. tekhn. nauk, retsenzent; YAKOVENKO, G.A., kand. tekhn. nauk, retsenzent

[Technology of the manufacture of machinery] Tekhnologiia mashinostroeniia. [By] S.A.Kartavov i dr. Kiev, Tekhnika, 1965. 526 p. (MIRA 18:7)

1. Kafedra tekhnologii mashinostroyeniya Kiyevskogo politekhnicheskogo instituta (for all except Golubov, Maksimov, Yakovenko).

[illegible], V.P., Cand Vet Sci -- (diss) "Certain indicators of the clinical physiological state of highly productive [illegible] cattle in relation to different types of feeding."

[illegible], 1958, 18 pp (Los Vet Acad. Min of Agr USSR) 140 copies

([illegible], 151-58, 102)

RADCHIK, A.S.

Technology

Sample comptation of reducing gear Odessa, 1950 Vol 2

9. Monthly List of Russian Accessions, Library of Congress, August 1952 ~~1953~~, Uncl.

RADCHIK, A.S.

DOBROVOL'SKIY, Viktor Afanas'yevich, doktor tekhnicheskikh nauk, zasluzhennyy deyatel' nauki i tekhniki; ZABLONSKIY, Konstantin Ivanovich; MAK, Solomon L'vovich; RADCHIK, Aleksandr Semenovich; ERLIKH, Lazar' Borisovich; PINEGIN, S.V., doktor tekhnicheskikh nauk, professor, retsenzent; ACHERKAN, N.S., doktor tekhnicheskikh nauk, professor, otvetstvennyy redaktor; ZALOGIN, N.S., redaktor izdatel'stva; RUDENSKIY, Ya.V., tekhnicheskiy redaktor

[Machine parts] Detali mashin. Kiev, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1956. 618 p. (MIRA 10:2)

1. Odesskiy politekhnicheskiy institut (for Dobrovol'skiy, Zablonskiy, Mak, Radchik, Erlikh)
(Machinery--Design)

SOV/137-57-6-11125

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 6, p 248 (USSR)

AUTHORS: Radchik, A.S., Nikiforov, I.P., Shtayger, Ye.V.

TITLE: Recording Wear, Moment of Friction, and Temperature in the Process of Wearing With the Aid of Wire Resistance Strain Gages (Registratsiya iznosa, momenta treniya i temperatury v protsesse iznashivaniya pri pomoshchi provolochnykh datchikov soprotivleniya)

PERIODICAL: V sb.: Povysheniye iznosostoykosti i sroka sluzhby mashin. Kiyev-Moscow, Mashgiz, 1956, p 182

ABSTRACT: A method was developed for the simultaneous recording of the wear and of the coefficient of friction without stopping the testing machine. The tests were conducted on an upright type machine. The wear was determined with the aid of wire resistance strain gages (WRG) pasted on a small bar which receives the bending force from the specimen (which varies in relation to the wear of the specimen); the coefficient of friction was determined with the aid of WRG pasted on the small bar receiving a force from a drum with a crossbar which is entrained by the forces of friction; the temperature at the contact surface was determined by the thermoelectric method. G.B.

Card 1/1

DOBROVOL'SKIY, Viktor Afanas'yevich, zasluzhennyy deyatel' nauki i tekhniki, doktor tekhnicheskikh nauk, professor; ZABLONSKIY, Konstantin Ivanovich, MAK, Solomon L'vovich; BADCHIK, Aleksandr Semenovich; KRLIKH, Lazar' Borisovich; PINEGIN, S.V., doktor tekhnicheskikh nauk, professor, retsenzent; ACHERKAN, N.S., doktor tekhnicheskikh nauk, professor, otvetstvennyy redaktor; ZALOGIN, N.S., redaktor izdatel'stva; RUDENSKIY, Ya.V., tekhnicheskiy redaktor

[Machine parts] Detali mashin. Izd. 2-oe, ispr. Kiev, Gos.nauchno-tekhn.izd-vo mashinostroit. lit-ry, 1957. 618 p. (MLRA 10:8)
(Machinery--Design)

KURENDASH, Rostislav Stefanovich; RADCHIK, A.S., dots., kand. tekhn. nauk, retsenzent; LEUTA, V.I., inzh., red.; HUDENSKIY, Ya.V., tekhn. red.

[Construction of springs] Konstruirovanie pruzhin. Kiev, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1958. 106 p. (MIRA 11:8)
(Springs (Mechanism))

3-1-32/32

AUTHOR: Kukibnyy, A.A., Dotsent, Candidate of Technical Sciences

TITLE: Review of a Textbook on Machine Parts (Obsuzhdeniye uchebnika po detalyam mashin)

PERIODICAL: Vestnik Vysshey Shkoly, 1958, # 1, pp 94-96 (USSR)

ABSTRACT: The textbook in question was compiled by V.A. Dobrovol'-skiy, K.I. Zablonskiy, S.L. Mak, A.S. Radchik and L.B. Erlikh.

In October 1957, the Ministry of Higher Education of the Ukrainian SSR convened a conference of instructors and collaborators of the Kiyev vtuzes at which the textbook "Machine Parts" was discussed. The assembly dealt with the textbook's structure, method of exposition of the material contained therein, the conformity of its contents with the curriculum, and a number of other problems.

Dotsent S.K. Dyachenko of the Khar'kov Polytechnic Institute (Khar'kovskiy politekhnicheskiy institut) pointed out that the student must be given 3 books on machine parts - a textbook, an aid for composing students' projects in the course of education, and an atlas of designs. The textbook should contain material that somewhat exceeds the one dis-

Card 1/3

cussed during the lecturing course, and comprise only the standard designs of machine parts, the computations should be simple and on a level with modern technical knowledge. The book under review meets all these requirements.

The aid for composing students' projects should be based on the textbook, and supplement it substantially, while the atlas on machine parts should contain drawings and schemes of modern designs, as well as an elaboration of the elements of construction.

The suggestions of dotsent S.K. Dyachenko in regard to the textbook and aids were unanimously approved by the conference participants.

Others participating in the discussions were: dotsent Ya.I. Yesipenko (Kiyev Technological Institute of Light Industry - Kiyevskiy tekhnologicheskiy institut legkoy promyshlennosti), dotsent K.A. Bortnovskiy (Kiyev Technological Institute of Food Industry - Kiyevskiy tekhnologicheskiy institut pishchevoy promyshlennosti), dotsent V.L. Sakhnenko (Kiyev Polytechnic Institute - Kiyevskiy politekhnicheskiy institut), Ye.B. Vitkup (Kiyev Automobile and Road Institute - Kiyevskiy avtomobil'no-dorozhnyy institut), dotsent F.P. Bondarovskiy (Ukrainian Agricultural Academy - Ukrainskaya

sel'skokhozyaystvennaya akademiya), and professor M.S. Komarov (L'vov Polytechnic Institute - L'vovskiy politekhnicheskiy institut).

The speakers expressed their willingness to participate in compiling a textbook on "Machine Parts" of high quality and to discuss the remarks made in respect of the present book with its authors. Three of the authors, who were present at the meeting, admitted the correctness of the criticism.

There is 1 Russian reference.

ASSOCIATION: Kiyev Technological Institute of Food Industry. (Kiyevskiy tekhnologicheskiy institut pishchevoy promyshlennosti)

AVAILABLE: Library of Congress

Card 3/3

AUTHORS: Radchik, A.S., Radchik, V.S. 20-119-5-25/59

TITLE: Surface Layer Deformations Due to Sliding Friction (O deformatsiyakh poverkhnostnykh sloyev pri trenii skol'-zheniya)

PERIODICAL: Doklady Akademii Nauk SSSR, 1958, Vol 119, Nr 5, pp. 933-935 (USSR)

ABSTRACT: In the mutually sliding friction of two unequally big surfaces one of them is in the state of constant contact while the contact at the other surface is constantly changed. Thus in the pair shaft-bearing the contact surface on the shaft is variable during one rotation, while the surface of the bushing remains the same. A similar picture can also be observed in the case of other friction pairs (e.g. cylinder surface-piston ring etc). First the authors report shortly on their previous works dealing with the same subject. The first series of experiments was carried out according to a scheme given. A slide block was mounted to a rotary lever which could be adjusted by hand. On both sides of the friction surface 2 transmitters each were mounted. A diagram shows an oscillogram typical for this series of

experiments. The total deformation of the surface with constant contact(of the slide block) maintained the same sign during the whole period and also remained the same as regards the amount. At the same time the deformation of the surface layer of the immovable surface changed its sign during one stage of the slide block. The second experimental series was carried out with rotary rollers which were mounted to the spindles of an Amsler machine. Both rollers consisted to steel 3. The leading roller was additionally loaded with a moment by a braking device. Also the oscillograms characteristic for this arrangement are shown by a diagram. The degree of the deformation of the surface layer varies as the amount of frictional force: A high value of the amplitude of deformation corresponds to a high value of the braking moment. The change of the sign of the deformation on the surface with variable contact is, according to the opinion of the authors, the reason for its increased wear. The investigation carried out proves those papers in which the plastic and elastic deformations of the surface layer, as well as the oscillations occurring in this layer are taken into account. There are 2 figures and 4 references, 4 of which are Soviet.

Surface Layer Deformations Due to Sliding Friction 20-119-5-25/59

PRESENTED: January 13, 1958, by P.A. Rebinder, Member, Academy of Sciences, USSR

SUBMITTED: December 20, 1957

Card 3/3

25(2) PHASE I BOOK EXPLOITATION SOV/2729

Dobrovol'skiy, Viktor Afanas'yevich, Konstantin Ivanovich Zablonskiy, Solomon L'vovich Mak, Aleksandr Semenovich Radchik, and Lazar' Borisovich Erlikh

Detali mashin (Machine Elements) 3rd ed., rev. and enl. Kiyev, Mashgiz, 1959. 581 p. 100,000 copies printed.

Reviewer: S.V. Pinegin, Doctor of Technical Sciences, Professor; Resp. Ed.: N. S. Acherkan, Doctor of Technical Sciences, Professor; Ed.: N.S. Zalogin; Chief Ed. (Southern Division, Mashgiz): V.K. Serdyuk, Engineer.

PURPOSE: This textbook is intended for students of institutions of higher technical education specializing in machinery construction and mechanical engineering.

COVERAGE: This is a textbook for the course, Machine Elements. It is a third edition, revised and enlarged. Design problems and basic theory are emphasized. Machine parts dealt with include joints, transmissions, axles, shafts, bearings, couplings, clutches, springs, and housings. Recently developed designs of machine parts and new methods of calculation have been added. Chapters dealing with material offered in other courses have been abridged or deleted. The authors thank the responsible editor for

Card 1/15

suggestions. References follow each chapter.

TABLE OF CONTENTS:

15(5)

AUTHORS: Yevdokimov, V. D., Radchik, A. S. SOV/20-128-4-21/65

TITLE: Estimation of the Effects of Surface-active Lubricants on the Friction Deformation of Surfaces

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 128, Nr 4, pp 713-714 (USSR)

ABSTRACT: The difficulty and relatively low sensitivity of various methods of estimation of the influence mentioned in the title is first described. The elastoplastic deformations occurring at friction are the main reasons for the change of the friction coefficient and of wear. These deformations characterize quantitatively and qualitatively the variations in the outside factors. The authors applied for their investigations the method of friction on thin plates. This method differs favorably from other methods by modulating the surface layer and by separating the elastoplastic deformations from the friction. The method is fairly simple and very sensitive. A thin plate of the material to be investigated is clamped to a solid flat underlay. A sliding member, which is weighed down, glides against the free end and causes elastic and plastic deformations on the surface, i.e. bending upward the

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free end of the strip. The varying degree of plastic deformation causes differently strong remanent deflections. In case of otherwise identical conditions the remanent deflection depends on the lubricating properties of the oil and on the activity of the substance which was present during the friction process. A diagram illustrates a series of curves obtained in the coordinates of the deflection A, and number of passes n, at the friction with a sliding member of steel 45 on a 0.3 × 5 × 100 mm red copper plate and at a sliding rate of 0.72 m/minute in the presence of various lubricating agents. The sum of the deflection and the position of the curves change considerably with insignificant physical-chemical variations in the surface layer (due to additions of small quantities of surface-active material to the lubricants). The slightest inclination of the plate to increase the deflection may be recognized in a surface-active medium. The character of the curve of the micro-hardness is in opposition to the character of the curve of the deflection. A larger deflection is corresponding to a lower micro-hardness and vice versa. The surface-active substances can increase and decrease (according

to the conditions) the strength of the surface. The results obtained by the authors with the method of friction of thin plates confirm the conclusions by P. A. Rebinder and his school (Ref 3) on the above-mentioned two-fold effect of a surface-active substance on metal. The described method is suitable for examination of oils and oils with different active additions, directly during the friction without having to abstract their physical-chemical properties from the friction dynamics and from the material of the pairs rubbing each other. There are 3 figures and 3 Soviet references.

ASSOCIATION: Odesskiy politekhnicheskiy institut (Odessa Polytechnic Institute)

PRESENTED: May 22, 1959, by P. A. Rebinder, Academician

SUBMITTED: May 20, 1959

Yevdokimov, V. D.

~~18 (3), 18 (1), 18 (4)~~ 12.9200

66163

AUTHORS: Yevdokimov, V. D., Radchik, V. S., Radchik, A. S.

SOV/20-128-5-15/67

TITLE: The Force of Friction and the Deformation of Surfaces

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 128, Nr 5, pp 921-923 (USSR)

ABSTRACT: V. D. Kuznetsov (Ref 3) does not believe that frictional forces in regions in front of the contact (compression) and behind the contact (elongation) can produce noticeable deformations. The existence of such deformations is verified in the present paper, not only for friction of unlubricated surfaces, but also in the presence of a thin layer of lubricant. Moreover, a new possibility of investigating the frictional properties of thin lubricant films was detected. This method consists in measuring the deformation of surfaces by means of wire tensimeters (Ref 4). The experimental arrangement is illustrated in a figure. Deformations measured thereby were deformations adjoining the region of direct contact. The following materials were investigated: steel U-8, bronze OTsS-6-6-3, cast iron SCh-15-32, aluminum, and textolite. The initial purity of the sample surfaces was of the order

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4

The Force of Friction and the Deformation of Surfaces SOV/20-128-5-15/67

▽▽▽[9]. One experimental series was made with spindle oil, another (steel on steel) with the following oils: spindle oil 2, avtol 10, avtol 18, MS 20, and castor oil. The sample and the ring were carefully cleaned before beginning the experiment. Five different stresses were used for these measurements. In every experiment the loop returned to the zero point after removal of stress, which indicates the elastic character of the deformation. Herefrom the following conclusions, among others, may be drawn: (1) In the case of sliding friction elastic deformations are observed, which spread over a considerable region beyond the contact. (2) For most of the materials investigated, the lubricant reduces the absolute value of the deformation, and the frictional force within the layer of a specific oil depends on the nature of the correlated surfaces. Aluminum forms an exception, since deformation in this case was increased by oil, even though the coefficient of friction is lowered. (3) For unlubricated surfaces the degree of increase in deformation with increasing frictional force is connected with the moduli of elasticity. For mineral oils, the degree of deformation for a

The Force of Friction and the Deformation of Surfaces SOV/20-128-5-15/67

given frictional force decreases with increasing oil viscosity in the case of steel-on-steel friction. From a change in deformation conclusions may be drawn concerning the change in the frictional force within the layer as a function of viscosity. (5) A reduction in viscosity on application of highly active castor oil (which has a low viscosity) is explained by the Rebinder effect, i.e. the plasticizing of a thin surface layer of metal caused by adsorption. There are 4 figures and 5 Soviet references.

ASSOCIATION: Odesskiy politekhnicheskiy institut (Odessa Polytechnic Institute)

PRESENTED: May 22, 1959, by P. A. Rebinder, Academician

SUBMITTED: May 20, 1959

Card 3/3

S/119/60/000/012/010/015
B012/B063

AUTHORS: Radchik, A. S. and Shtayger, Ye. V.

TITLE: Dynamometric Pickups With Systems of Helical Resistance Pickups

PERIODICAL: Priborostroyeniye, 1960, No. 12, pp. 22-24

TEXT: Fig. 1 shows a resistance pickup for which a partially hollow cylinder with two flanges is used as an elastic element. Wire resistors are wound round the cylinder. The hollow parts of the elastic element undergo 80% of the total deformation, while only 20% goes to its central part. Therefore, the active windings 1 and 2 and the compensating windings 3 and 4 are arranged in the way shown in the figure. However, these elements have a disadvantage: Friction occurs on the front. To eliminate this disadvantage, a pickup consisting of two special cup springs has been designed. It is shown that the parameters of the spring may be determined from the formula given in the paper (Ref., footnote on p.23) for the spring tension and from the formula given here for the thickness, s, of the disk if the load and the sag, f, are assumed. Tests of the pickup at NIKIMP have

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Dynamometric Pickups With Systems of Helical Resistance Pickups

S/119/60/000/012/010/015
B012/B063

shown that the signal power can be increased by four times when using cup springs instead of the usual elements with strain gauges. There are 4 figures, 1 table, and 1 Soviet reference.

Text to Fig. 1: System of Helical Resistance Pickups.
Text to Fig. 3: Pickup Consisting of Two Rigid Cup Springs, and the Characteristic of Stress Distribution According to the Thickness of the Leading Edge of the Spring.

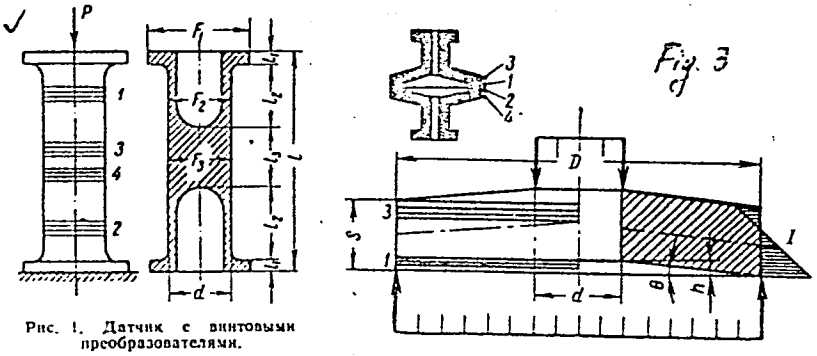

Рис. 1. Датчик с винтовыми преобразователями.

Fig. 3

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S/146/60/003/004/006/010
B004/B056

13,2960

AUTHORS: Yevdokimov, V. D., Radchik, A. S.

TITLE: An Apparatus for the Investigation of Friction Processes by the Method of "Thin Plates"

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye, 1960, Vol. 3, No. 4, pp. 48-52

TEXT: Friction processes act only upon a thin surface layer of the material. Therefore, the authors investigated such processes by means of lamellas over which a heavy slider was pushed. Fig. 1 shows the sag of a unilaterally clamped copper lamella as a function of the number of slider passages (rate: 0.72 m/min; load: 75 kg/mm^2). The initial deformation again decreases during the following passages. The resulting curve characterizes the conditions under which friction occurs. The authors constructed a portable measuring apparatus (Fig. 2), the function of which is described. The clamped lamella (0.3-0.5 × 5 × 100 mm) is pulled through underneath a load, after which it is lifted in a perpendicular direction, and the amount of sag is recorded by breaking a low-voltage contact at a height

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An Apparatus for the Investigation of Friction Processes by the Method of "Thin Plates"

S/146/60/003/004/006/010
B004/B056

corresponding to the sag. By means of a multiplicator it is possible to record the diagram on different scales. An organic glass rim allows to fill in lubricants. The apparatus makes it possible to investigate the action of oils and various admixtures. By this method it is possible to investigate, on a model, the surface layer which has been changed by friction processes. These changes may be investigated on the samples, so that the phenomena occurring as a result of friction, cutting, or drawing may be studied. The high sensitivity of method and apparatus make it possible to test finished products in the laboratory as well as in operation. This paper was recommended by the kafedra detaley mashin (Chair of Machine Elements). There are 2 figures and 2 Soviet references.

ASSOCIATION: Odesskiy politekhnicheskiy institut
(Odessa Polytechnic Institute)

SUBMITTED: February 20, 1960

Card 2/2

S/020/60/134/003/009/020
B019/B060

AUTHORS: Radchik, A. S., Yevdokimov, V. D.

TITLE: The Bauschinger Effect in Sliding Friction

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 134, No. 3, pp. 571 - 573

TEXT: If a sample is first stretched beyond its yield point, then heavily pressed, and again stretched, the limit of elasticity is lowered, and the material is weakened instead of toughened. This is defined as the Bauschinger effect. The authors of the present paper studied the effect of sliding direction on the character of the elastic-plastic deformations in the surface layer. The authors applied a method which they had already described in Ref. 4, by which the friction of a thin sheet (Cu) on a solid base (steel) was measured. The sheet dimensions were 0.3·5·100 mm, and the sliding rate was 0.72 m/sec. Results showed that the surface deformation caused by friction on one side gives rise to a hardening of the surface. The contrary happens with reversive sliding. In the authors' opinion, the hardening of the surface layer as a result of

The Bauschinger Effect in Sliding Friction S/020/60/134/003/009/020
B019/B060

plastic deformation through friction is dependent on the sliding direction. The surface hardening estimated after the microhardness is higher with unidirectional than with reversive sliding. The authors correlate this fact with the Bauschinger effect. K. V. Savitskiy is mentioned. There are 4 figures and 5 Soviet references.

PRESENTED: April 27, 1960, by P. A. Rebinder, Academician

SUBMITTED: April 25, 1960

Card 2/2

DOBROVOL'SKIY, Viktor Afanas'yevich; ZABLONSKIY, Konstantin Ivanovich; MAK, Solomon L'vovich; RADCHIK, Aleksandr Semenovich; ERLIKH, Lazar' Borisovich; PYATNITSKIY, A.A., prof., retsenzent; ACHERKAN, N.S., doktor tekhn. nauk, prof., otv. red.; BYKOVSKIY, A.I., inzh., red.; GORNOSTAYPOL'SKAYA, M.S., tekhn. red.

[Machine parts] Detali mashin. Izd. 6., dop. Moskav, Mashgiz, 1962. 601 p. (MIRA 16:5)

(Machinery)

S/119/63/000/003/006/010
D201/D308

AUTHORS: Dymkovskiy, V.P., Radchik, A.S. and Shtayger, Ye.V.

TITLE: A dynamometric pick-up

PERIODICAL: Priborostroyeniye, no. 3, 1963, 17-18

TEXT: A brief description of the mechanical construction of a linear resistive pressure transducer developed at the department of elements of machines of the Odesskiy politekhnicheskiy institut (Odessa Polytechnic Institute). The flexible element of the pick-up has a max. loading of 15 t, it is made of steel 70C3A (70SZA). The transducer converts the flexural deformation of the discordal part of the transducer into the radial deformation of two rings bonded rigidly to the body of the flexible element. Tensometric wire, covered with a layer of glue, is bonded to the cylindrical surface of each ring. The effects of certain factors in design on the transducer performance are tabulated. The pick-up is stated to be 3 times as sensitive as that with a loop and 9 times more sensitive than one with a spiral wire transducer. There are 2 figures and 1 table.

Card 1/1

[illegible]

Multicell dynamometering transducer with helical converters. Izv. vys. ucheb. zav.; prib. 8 no.5:115-119 '65. (MIRA 18:10)

1. Odesskiy politekhnicheskiy institut. Rekomendovana kafedroy detaley mashin Odesskogo politekhnicheskogo instituta.

[illegible]
[illegible] Bibliographic Report

Call No.: [illegible]

[illegible]
Authors: Ch. I - [illegible], A. L. and [illegible], F. F.
Ch. II - [illegible], [illegible] A., Cch. of Eng. Sci., and [illegible], T. V. Eng.
Ch. III - [illegible], [illegible], Cch. of Eng. Sci., and [illegible]VICH, [illegible] Eng.
Ch. IV - V - [illegible], [illegible] A., Cch. of Eng. Sci.
Ch. VI - [illegible], [illegible], Cch. of Eng. Sci.
Ch. VII - [illegible], [illegible], Cch. of Eng. Sci., and [illegible], [illegible] Eng.
Ch. VIII - RADCHIK, B. I., Eng.
Ch. IX - GORDIYCHUK, I. B.
Ch. X - [illegible], V. A., Eng.

Full Title: TECHNIQUE OF CINEMATOGRAPHY
Series: Accomplishments of Soviet Cinema Technique
Transliterated Title: Kinos'emochnaya tekhnika
Seriya: Dostizheniya sovetskoy kinotekhniki

Publishing Data
Originating Agency: None
Publishing House: State Publishing House of Cinematographic Literature (Goskinoizdat)
Date: 1952
No. pp.: 462
No. copies: 10,000
Editorial Staff
Editor: None
Tech. Ed.: None
Ed.-in-Chief: Goldovskiy, E. M., Dr. of Technical Sciences
Appraiser: None

Card 2/2

Full Title: [illegible]

Series: Accomplishments of Soviet Cinema Technique

Text Data

Coverage: The book is the fourth in the series "Accomplishments of Soviet Cinema Technique" and describes the basic methods of taking colored motion pictures. The technique for black-white photography was given in the three previous books. A description of the combined and special types of production now adopted in Soviet cinema studios and the technique of cinema stage settings will be published in one of the following issues of the series.

The book primarily describes the lighting equipment, lenses and deflectors, electric power units for light effects, and arrangements for color-photographic balances of different intensities. The book also gives brief data on: apparatus for normal and synchronic methods of taking pictures; narrow and broad films; tripods of various types; controlling method and mechanisms in cinematographic apparatuses.

Purpose: General information for wide circle of specialists in motion pictures.

Facilities: Scientific Research Institute for Motion Pictures and Photography (N.I.K.F.I.); cinema-studios in Moscow and Leningrad regions.

No. Russian references: None.

Available: A.I.D., Library of Congress

ZUKHOVITSKIY, Semen Izrailevich; AVDEYEVA, Ligiya Igorevna; RADCHIK, I.A., red.

[Linear and convex programming; a reference manual] Lineinoe i vypukloe programmirovanie; spravochnoe rukovodstvo. Moskva, Nauka, 1964. 348 p. (MIRA 17:11)

ZUKHOVITSKIY, Semen Izrailevich; RADCHIK, Irina Abramovich;
KHATSET, B.I., red.

[Mathematical methods of network planning] Matematicheskie metody setevogo planirovaniia. Moskva, Nauka, 1965.
296 p. (MIRA 18:11)

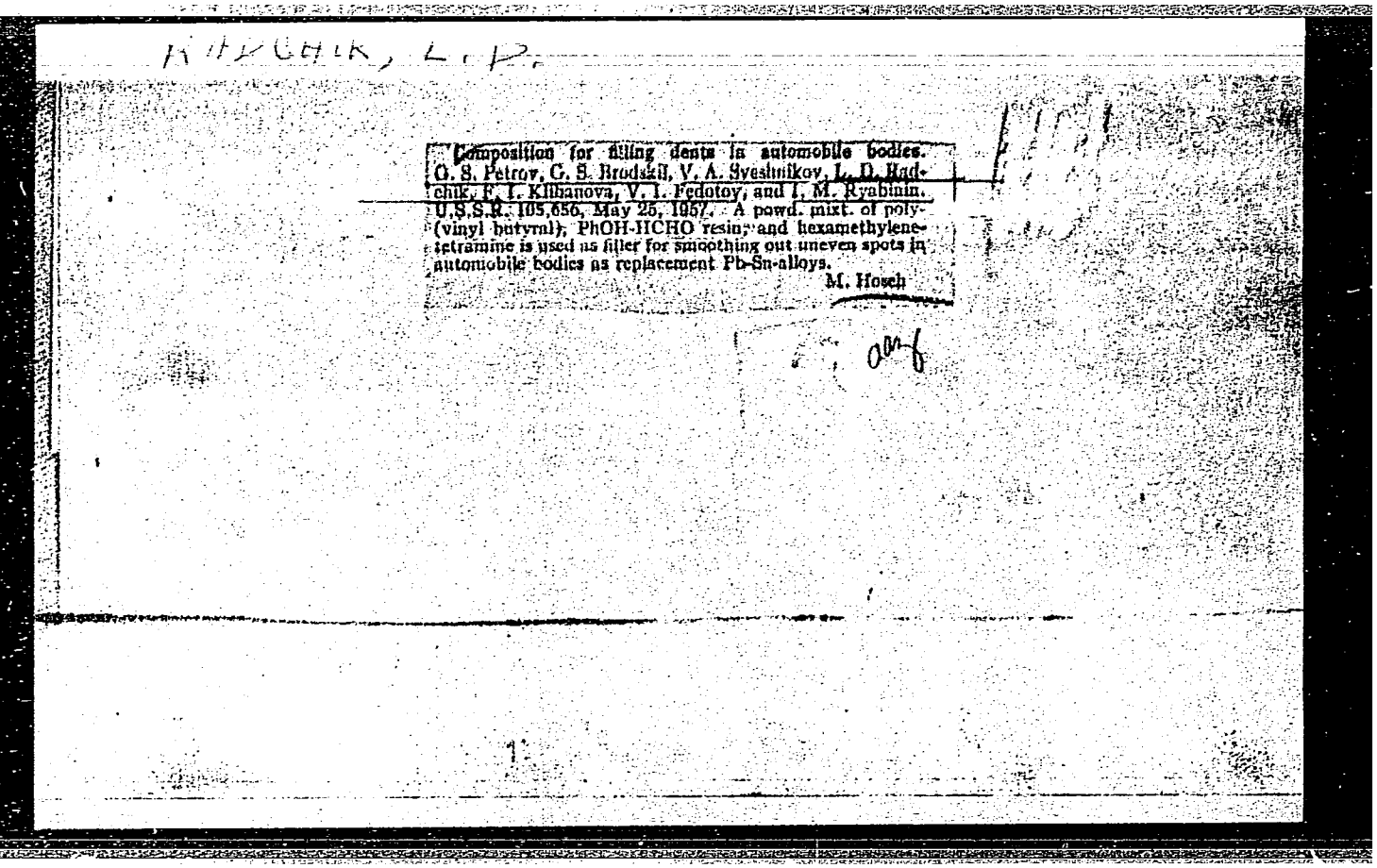
RADCHIK, I.I., red.; TSVETKOV, D.A., red.; KORSUN, Ye.P., ved. red.; POLOSINA, A.S., tekhn. red.

[Instructions for the selection of apparatus, equipment, appliances, and receptacles for liquefied gas; a catalog-handbook]Ukazaniia po vyboru apparatury, oborudovaniia, armatury i kip dlia szhizhennogo gaza; katalog-spravochnik. Moskva, Gostoptekhizdat, 1962. 161 p. (MIRA 15:12)

1. Gosudarstvennyy institut po proyektirovaniyu magistral'nykh gazoprovodov i sooruzheniy gazovoy promyshlennosti Yuga.
(Liquefied petroleum gas)

GOFMAN-ZAKHAROV, Petr Maksimovich; VESHITSKIY, Vil'yam Anatol'yevich; RADCHIK, I.I., inzh., retsenzent; YAROTSKIY, V.D., inzh., red. izd-va; MATUSEVICH, S.M., tekhn. red.

[Transportation and storage of liquefied hydrocarbon gases] Transport i khranenie szhizhennykh uglevodorodnykh gazov. Kiev, Gostekhizdat USSR, 1963. 278 p. (MIRA 16:5)
(Liquefied petroleum gas--Transportation)
(Liquefied petroleum gas--Storage)



Composition for filling dents in automobile bodies. G. S. Petrov, G. S. Brodskiĭ, V. A. Syeshnikov, L. D. Radchik, E. I. Klibanova, V. I. Fedotov, and I. M. Ryabinin. U.S.S.R. 105,656, May 25, 1957. A powd. mixt. of poly(vinyl butyral), PhOH-HCHO resin, and hexamethylenetetramine is used as filler for smoothing out uneven spots in automobile bodies as replacement Pb-Sn-alloys.

M. Hosch

RADCHIK, M.

Ways of normalizing small-scale wholesaling of goods. Den.i kred. 15 no.3:39 Mr '57. (MLRA 10:5)
(Wholesale trade)

RADCHIK, O.S. [Radchyk, O.S.], nauchnyy sotrudnik; AYZENSHTEYN, T.V., nauchnyy sotrudnik

Semiautomatic device for grafting grapevines. Mekh.sil'.hosp. 10 no.11:23-24 N '59. (MIRA 13:3)

1. Ukrainskiy nauchno-issledovatel'skiy institut vinogradarstva i vinodeliya im.Tairova.
(Viticulture) (Grafting)

VVEDENSKIY, Tigriy Aleksandrovich; RADCHIK, V.G., kand.tekhn.nauk, retsenzent; LEUTA, V.I., inzh.red.; RUDENSKIY, Ya.V., tekhn.red.

[Setting standards and norms in machinery manufacturing]. Standartizatsiia v mashinostroenii. Kiev, Gos. nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1957. 75 p. (MIRA 11:2)
(Machinery industry--Standards)

AL'SHITS, Isaak Yakovlevich, kand.tekhn.nauk; VERZHBITSKIY, Nikolay Fedorovich, kand.tekhn.nauk; ZOMMER, Eduard Feliksovich, kand. tekhn.nauk; RADCHIK, V.S., kand.tekhn.nauk, retsenzent; KUKIBNYY, A.A., kand.tekhn.nauk, red.; LEUTA, V.I., inzh.,red.

[Sliding bearings] Opory skol'zheniia. Kiev, Gos.nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1958.195 p. (MIRA 11:12)
(Bearings (Machinery))

20-119-5-25/59

AUTHORS: Radchik, A.S., Radchik, V.S.

TITLE: Surface Layer Deformations Due to Sliding Friction (O deformatsiyakh poverkhnostnykh sloyev pri trenii skol'-zheniya)

PERIODICAL: Doklady Akademii Nauk SSSR, 1958, Vol 119, Nr 5, pp. 933-935 (USSR)

ABSTRACT: In the mutually sliding friction of two unequally big surfaces one of them is in the state of constant contact while the contact at the other surface is constantly changed. Thus in the pair shaft-bearing the contact surface on the shaft is variable during one rotation, while the surface of the bushing remains the same. A similar picture can also be observed in the case of other friction pairs (e.g. cylinder surface-piston ring etc). First the authors report shortly on their previous works dealing with the same subject. The first series of experiments was carried out according to a scheme given. A slide block was mounted to a rotary lever which could be adjusted by hand. On both sides of the friction surface 2 transmitters each were mounted. A diagram shows an oscillogram typical for this series of

Card 1/3

experiments. The total deformation of the surface with constant contact(of the slide block) maintained the same sign during the whole period and also remained the same as regards the amount. At the same time the deformation of the surface layer of the immovable surface changed its sign during one stage of the slide block. The second experimental series was carried out with rotary rollers which were mounted to the spindles of an Amsler machine. Both rollers consisted to steel 3. The leading roller was additionally loaded with a moment by a braking device. Also the oscillograms characteristic for this arrangement are shown by a diagram. The degree of the deformation of the surface layer varies as the amount of frictional force: A high value of the amplitude of deformation corresponds to a high value of the braking moment. The change of the sign of the deformation on the surface with variable contact is, according to the opinion of the authors, the reason for its increased wear. The investigation carried out proves those papers in which the plastic and elastic deformations of the surface layer, as well as the oscillations occurring in this layer are taken into account. There are 2 figures and 4 references, 4 of which are Soviet.

Surface Layer Deformations Due to Sliding Friction 20-119-5-25/59

PRESENTED: January 13, 1958, by P.A. Rebinder, Member, Academy of Sciences, USSR

SUBMITTED: December 20, 1957

Card 3/3

BASHMAKOV, Viktor Petrovich; DUBININ, Aleksandr Dmitriyevich; LEVINSON, V.N., prof., doktor tekhn.nauk, retsenzent; RADCHIK, V.S., dotsent, kand.tekhn.nauk, red.; TYNYANYY, G.D., red.izd-va

[Design of belt and chain transmissions] Raschet i proektirovanie remennykh i tsepnykh peredach. Kiev, Gos.nauchno-tekhn. izd-vo mashinostroit.lit-ry, 1959. 123 p. (MIRA 13:4)
(Belts and belting) (Chains)

~~18 (3), 18 (1), 18 (4)~~ 18.8200

66163

SOV/20-128-5-15/67

AUTHORS: Yevdokimov, V. D., Radchik, V. S., Radchik, A. S.

TITLE: The Force of Friction and the Deformation of Surfaces

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 128, Nr 5, pp 921-923 (USSR)

ABSTRACT: V. D. Kuznetsov (Ref 3) does not believe that frictional forces in regions in front of the contact (compression) and behind the contact (elongation) can produce noticeable deformations. The existence of such deformations is verified in the present paper, not only for friction of unlubricated surfaces, but also in the presence of a thin layer of lubricant. Moreover, a new possibility of investigating the frictional properties of thin lubricant films was detected. This method consists in measuring the deformation of surfaces by means of wire tensimeters (Ref 4). The experimental arrangement is illustrated in a figure. Deformations measured thereby were deformations adjoining the region of direct contact. The following materials were investigated: steel U-8, bronze OTsS-6-6-3, cast iron SCh-15-32, aluminum, and textolite. The initial purity of the sample surfaces was of the order

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The Force of Friction and the Deformation of Surfaces SOV/20-128-5-15/67

▽▽▽[9]. One experimental series was made with spindle oil, another (steel on steel) with the following oils: spindle oil 2, avtol 10, avtol 18, MS 20, and castor oil. The sample and the ring were carefully cleaned before beginning the experiment. Five different stresses were used for these measurements. In every experiment the loop returned to the zero point after removal of stress, which indicates the elastic character of the deformation. Herefrom the following conclusions, among others, may be drawn: (1) In the case of sliding friction elastic deformations are observed, which spread over a considerable region beyond the contact. (2) For most of the materials investigated, the lubricant reduces the absolute value of the deformation, and the frictional force within the layer of a specific oil depends on the nature of the correlated surfaces. Aluminum forms an exception, since deformation in this case was increased by oil, even though the coefficient of friction is lowered. (3) For unlubricated surfaces the degree of increase in deformation with increasing frictional force is connected with the moduli of elasticity. For mineral oils, the degree of deformation for a

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given frictional force decreases with increasing oil viscosity in the case of steel-on-steel friction. From a change in deformation conclusions may be drawn concerning the change in the frictional force within the layer as a function of viscosity. (5) A reduction in viscosity on application of highly active castor oil (which has a low viscosity) is explained by the Rebinder effect, i.e. the plasticizing of a thin surface layer of metal caused by adsorption. There are 4 figures and 5 Soviet references.

ASSOCIATION: Odesskiy politekhnicheskiy institut (Odessa Polytechnic Institute)

PRESENTED: May 22, 1959, by P. A. Rebinder, Academician

SUBMITTED: May 20, 1959

TIMOFEYEV, Pavel Vasil'yevich; RADCHIK, V.S., dotsent, kand.tekhn.nauk, retsenzent; SOROKA, M.S., red.; SOROKA, M.S., red.

[Lubricating and cooling fluids used in metal cutting] Smazochno-okhlazhdaiushchie zhidkosti, primeniaemye pri rezanii metallov. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1960. 114 p. (MIRA 13:7)

(Metalworking lubricants)

S/020/61/141/004/007/019
B143/B104

AUTHORS: Kobus, G. L., and Radchik, V. S.

TITLE: Effect of elastic deformations of the friction surface on wear resistance

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 141, no. 4, 1961, 836-837

TEXT: The highest effect on the wear of adjoining metal surfaces is due to plastic deformation, the effect of elastic deformations is low. The occurrence of plastic deformations preceding the separation of particles is connected with strong elastic deformations which depend on the elastic properties of the surface layer, and is proportional to the friction surface area. The friction of a rotating ring in a cylinder at rest was investigated: a ring of bronze ОЦС 6-6-3 (OTsS 6-6-3) on steel 35 and vice versa. The experimental conditions were as follows: pressure 15 kg/cm^2, sliding speed 3 m/sec, oil lubrication. First, the central part of the sliding area was subjected to wear and, subsequently, the same

Effect of elastic deformations of the...

was done with the lateral parts. Then, the ring was reversed; now, the lateral parts of the sliding area and, subsequently, the central part were subjected to wear (Fig.1). The bronze-steel pair showed a wear of 16 mg within 20 hr for the central part on the first side of the ring. Thus, the lateral zones of the ring were also subjected to elastic deformation, and when experiments were conducted immediately afterwards in the lateral parts, the same wear of 16 mg occurred already after 4 hr. On the second side of the ring, the same wear of the central part which was conducted after the wear of the lateral parts was obtained after 5 hr instead of 20 hr. Qualitatively, the investigations of the abrasion of the steel-bronze pair rendered the same result. Hence, it was found that the preceding elastic deformation of the friction surface substantially increased abrasion. Elastic deformation can be reduced by plasticization of the surface layer of the metal - Rebinder effect - by application of an active surface lubrication (S. Ya. Veyler, V. I. Likhtman, P.A.Rebinder, DAN, 116, no. 3 (1957). There are 3 figures and 7 Soviet references.

ASSOCIATION: Odesskiy gidrometeorologicheskiy institut
(Odessa Hydrometeorological Institute)

S/020/61/141/004/007/019
B143/B104

Effect of elastic deformations of the...

PRESENTED: July 31, 1961, by P. A. Rebinder, Academician

SUBMITTED: July 6, 1961

Card 3/3

SHIL'GORIN, F.A.; RADCHIK, V.S.

A friction machine with separate measurement of specimen wear.
Zav. lab. 31 no.2:237-239 '65. (MIRA 18:7)

1. Odesskiy gidrometeorologicheskiy institut.

L 14072-66 EWT(m)/EWP(w)/T/EWP(t)/EWP(b) JD/DJ
ACC NR: AP6003487 SOURCE CODE: UR/0020/66/166/001/0074/0076

AUTHOR: Radchik, V. S.

ORG: Odessa Hydrometeorologic Institute (Odesskiy gidrometeorologicheskiy institut)

TITLE: Interaction between rough surfaces in friction and wear

SOURCE: AN SSSR. Doklady, v. 166, no. 1, 1966, 74-76

TOPIC TAGS: friction, wear resistance, abrasiveness

ABSTRACT: The theoretical model for studying friction and wear phenomena is usually taken as a solitary projection made in the form of an absolutely rigid indenter which slides along the surface being deformed. The author shows that substitution of the actual surface of a conjugate body in place of the indenter may produce new results. The following two formulas are derived assuming that a plate is subjected to the same force of friction from two sliders made of materials X and Y respectively:

$$\delta_{plX}/\delta_{plY} = (G_{pl}+G_Y)/G_{pl}+G_X)$$
$$\tau_{plX}/\tau_{plY} = (G_{pl}+G_Y)/G_{pl}+G_X)$$

Card 1/2 UDC: 539.621 + 539/375

L 14072-66

ACC NR: AP6003487

where δ_{plX} and δ_{plY} are the elastic displacements of a discrete contact spot on the surface of the plate in conjunction with sliders made of materials X or Y; G_{pl} is the modulus of elasticity for the material of the plate; G_X and G_Y are the moduli of elasticity for materials X and Y of the slider; τ_{plX} and τ_{plY} are the tangential stresses on the surface of the plate in contact with sliders made of material X or material Y respectively. When $G_Y > G_X$, we have $\delta_{plY} < \delta_{plX}$ and $\tau_{plY} < \tau_{plX}$, i.e. the displacements and tangential stresses due to the force of friction on the plate are inversely related to the elastic characteristics of the slider material. Elastic stresses (deformations) and wear are directly related. Therefore these formulas indicate that the durability of a material is a direct function of the parameters which characterize the durability of materials used in a conjugate component (slider). The formulas were experimentally confirmed. Orig. art. has: 3 figures, 4 formulas.

SUB CODE: 13/ SUBM DATE: 22Mar65/ ORIG REF: 005/ OTH REF: 000

Card 2/2

RADCHUK, B. M.

"An Apparatus for Drawing Topographic Charts used in the Study of Anatomy," Veterinariya, No. 1, 1950. Asst., Kiev Veterinary Inst., -c1950-.

RADCHUK, G.

Our soccer players. Neftianik 7 no.11:35-36 N '62.
(MIRA 16:6)

(Baku--Soccer)

S/194/61/000/012/044/097
D256/D303

AUTHORS: Bakulin, A. I. and Radchuk, I. I.

TITLE: Detecting defects in carrying cables of cable ways

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika, no. 12, 1961, 27, abstract 12V230 (Tr. Vses. n.-i. in-ta pod"yomno-transp. mashinostr. 1960, no. 9,3-33)

TEXT: A description is given of an experimental arrangement developed by VNIIPTMASh for testing carrying cables of cable-ways. It was required that the instrument should show internal defects of the cable along its total length including both open and enclosed sections, i.e. including the union couplings and pillar shoes. For this reason two kinds of instruments were devised: Electromagnetic and ray-type; and a detailed description of the theory and construction of both types of instruments is presented together with the results of laboratory tests. The methods of cable testing used on cable-ways in other countries are also discussed. There are 26 figures and 12 references. [Abstractor's note:Complete translation.]

Card 1/1

RADCHUK, K., mashinist vrubovoy mashiny.

Cutter loaders for Kizel Basin mines. Mast.ugl.5 no.12:20 D '56.
(MLRA 10:2)

1. Shakhta No.2 tresta Kospashugol'.
(Kizel Basin--Coal mining machinery)

RADCHUK, P.K. (Brest)

Using the quiz system of measuring the knowledge of students in secondary schools. Mat. v shkole no.3:70-71 My-Je '62.
(MIRA 15:7)

(Mathematics--Study and teaching)

RADCHUK, V.V., otvetstvennyy red.; VOINSTVENSKIY, M.A., red.; KISTYAKOVSKIY, A.B., red.; KORNEYEV, A.P., red.; SOKUR, I.T., red.; PARKHOMENKO, V.V., red.; DOBROVOL'SKIY, A.A., red.; GRIB, F.M., khudozhestvenno-tekhn.red.

[Hunting in the Ukraine] Okhota na Ukraine. Izd. 2-oe. Kiev, Gos. izd-vo sel'khoz. lit-ry USSR, 1957. 325 p. (MIRA 11:2)
(Ukraine--Hunting)

RADCHYENKO, S. I.

30 391

Novoye v morfogyenyezye ozimykh zlakoy. Trudy in-ta fiziologii rastyeniy. Im. timiryazyeva, T. VI, Vyp. 2, 1949, S. 210-13.

SO: Letopis' No. 34

LUPASCU, Gh., memberu coresp. al Academ. RPR; AGAVRILOAEI, A.; COSTIN, P.; ELIAS, M.; ZELIG, M.; RADCOV, G.; FEODOROVICI, St.; GOLDBERGEN, E.; SZABO, M.; STANCULESCU-ROSIU, I.

Study of pappataci fever. Bul. stiint. sect. med. 8 no.1: 265-295 Jan-Mar 56.

(FEVER
pappataci fever, epidemiol. & prev. in Rumania.)

RADCZEWSKI, O. E.

1003. Electron-mikroscope investigations on the conversion reactions of clay minerals.—O. E. RADCZEWSKI (*TonindustrZtg*, 77, 291, 1953). Kaolin fired at >550° C. is highly reactive, but uncertain whether a definite anhydride, $Al_2O_3.2SiO_2$, is formed or whether free oxides are present. Tscheischwili and Bussem, who used X-rays and tested the fluorescence with morin, found free γ-alumina above 600° C. The electron-micrograph of the firing-stages of Schnaitenbach kaolin reveals that the external lamellar shape is preserved up to 900° C., but a roughening of the surface, first noticed at 600° C., becomes more and more pronounced until the material transforms into a mass of unorientated particles. Electron-diffraction patterns are shown diagrammatically for various firing-temperatures. At 500° C. some kaolinite lines have already disappeared and at 600°–700° C. only a few remained. On the other hand, from 700° C. there occur a diffuse ring of amorphous SiO_2 and clear wide interferences of γ-alumina which indicates that this decomposition product is finely crystalline. Above 950° C. these 2 decomposition products react to form mullite, $3Al_2O_3.2SiO_2$, and the last 2 lines of kaolinite disappear. Above 1,000° C. the mullite interferences become clearer and clearer (crystal growth), and γ-Al_2O_3 disappears. Above 1,200° C. the amorphous SiO_2 crystallizes to cristobalite. Metakaolin does not seem to exist and the high reactivity of ignited kaolin must be attributed to the extremely fine grain-size and close mixing of the decomposition products. (16 figs.)

RADCZEWSKI, O.E.

548.74 : 548.735.6

914. THE CRYSTALLOGRAPHIC ORIENTATION OF MINERALS BASED ON THEIR ELECTRON DIFFRACTION PATTERNS. O.E.Radczewski and H.Grossens. Optik, Vol. 13, No. 1, 307-15 (1956). In German.

It is shown how a suitably equipped electron microscope can yield focused and defocused diffraction patterns of 1 μ areas selected from a given object. With the help of a selector diaphragm, various Bragg reflections can be singled out and made to produce dark-field images. From the combination of these, the orientation of small single crystals can be deduced.

A.E.I. Research Laboratory

RADDATIS, K.F.; SHAPKIN, I.F.

Upper drum in two-drum boilers of small capacity. Energ.biul.no.9:20-26 S '53. (MLRA 6:8)
(Steam boilers)

RADECHKO, A.Ye.; RVACHEV, A.L.

Ampere-second characteristics of power silicon valves. Izv. vys. ucheb. zav.; fiz. 8 no.6:145-151 '65.
(MIRA 19:1)

1. Odesskiy politekhnicheskiy institut. Submitted May 18, 1964.

PAWELSKI, Slawomir; KONOPKA, Lech; [illegible], Stanislaw; RADECKA, Krystyna

Comparative testing of the iron binding capacity of the blood serum by biological and isotope methods. Pol. tyg. lek. 20 no.17: 587-589 26 Ap '65.

1. Z Kliniki Chorob Wewnetrznych Instytutu Hematologii w Warszawie (Kierownik: doc. dr. med. S. Pawelski).

... Pawelski.

... of desferrioxamine test in the diagnosis of iron excess ... the body. Pol. tyg. lek. 20 no.37:1071-1074 19 S. '65.

... Klinika Chorób Wewnętrznych Instytutu Hematologii w ... (Kierownik: doc. dr. med. S. Pawelski).